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EXAMINER	
JONES III, CLYDE H	
ART UNIT	**PAPER NUMBER**
2623	

DATE MAILED: 06/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/890,315	TEICHNER, DETLEF
	Examiner	Art Unit
	Clyde H. Jones III	2623

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *09 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-20* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 July 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *7/27/01, 5/22/06*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-3, 5-10, and 12-20, are rejected under 35 U.S.C. 103(a) as being unpatentable over Stiegler et al. (US 5,940,398), in view of Sekine et al. (US 5,808,660), in further view of Wakai et al. (US 5,596,647), in further view of Ng et al. (US 5,121,205), and in even further view of Stanger et al. (US 6,097,435).

Regarding claims 1, 13-15, and 19, Stiegler teaches a local (ring) network 31-fig. 3 in a vehicle with several subscribers (nodes) 32-42 distributed over the vehicle, which form data sources and data sinks (receivers) (col. 4, lines 10-16; col. 6, lines14-23 & 24-28; col. 1, lines 52-60) and which are collected with one another by a data line (optical fiber) 43 to transmit audio (col. 2, line 28), video (col. 2, lines 29) and control data (col. 3, lines 12-21), such that the audio, video, and control data are transmitted in a format which prescribes a clocked sequence of individual bit groups of the same length (col. 1, lines 65-67), in which certain bit positions are provided respectively for the audio, video, and control data, (col. 1, line 67-col. 2, line 8) and the bit positions for the audio or video data respectively are collected together in several collected component (partial/regions

of) bit groups (col. 2, lines 4-12), and the data assigned to these component bit groups are assigned by transmitted control signals to a certain data source or data sink (col. 2, lines 6-8; col. 6, lines 45-49), <u>at least one</u> data source (video camera 41 and/or CD player 42, inter alia; col. 2, lines 26-31) being present for audio (CD player 42 provides audio and col. 3, lines 40-45 & col. 6, lines 35-40; in which the Examiner interprets the video camera alone to inherently comprise audio output/source in order to perform the left/right audio channel distinction as disclosed) and video data (Video camera 41; and/or navigation system 38) and <u>at least one</u> data sink being present for the audio (amplifier 34 and/or speaker 35) and video data (control and display unit 32) transmitted over the data line, wherein the <u>at least one</u> data source comprises:

a data source for audio and video data (as discussed above) including, a demultiplexer to separate the audio and video data contained in one signal (Stiegler inherently teaches a demultiplexer in order for the system to separate the data into left and right channels or to separate "channels of **any** kind", e.g., to separate a stereo audio CD into left and right channels as disclosed in col. 6, lines 33-41 and col. 3, lines 8-11 & lines 33-39),

a bit stream decoder to decode the audio data (col. 4, lines 42-47; in which data of various kinds, interpreted by the Examiner to include audio is decoded, i.e., distinct channels are identified from a CD for example and allocated to a single specified bit group),

a bus interface (Stiegler inherently discloses a bus interface in order for the devices 32-42 to be sources and sinks for data as disclosed) that inserts the, decoded

audio data (col. 3, lines 4-11; col. 6, lines 33-40) and the video data (col. 4, lines 31-33; col. 6, lines 33-40) from the data source into their intended component bit groups (col. 2, lines 18-25, 48-59; col. 6, lines 50-54), however

fails to teach compressed audio, compressed video, an audio buffer for intermediately storing the separated audio data, a bit rate converter to recode the compressed video data, a video buffer for intermediately storing the separated video data, and a control unit that is connected to the audio buffer and the video buffer, and which specifies and controls the adjustable intermediate storage time of the buffers.

In an analogous art, Sekine teaches it is desirable to use compressed audio/video (MPEG compression of audio/video) either MPEG1 or MPEG2 for transmission of signals at various definition (bit rates) depending on the type of device connected to the network (col. 6, lines 6-12; col. 4, lines 40-43; figs. 10-11). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler to include compressed audio/video as taught by Sekine for the added advantages of being in compliance with a well known/commercial standard that enables reduced bit rate playback of a diverse selection of media/media types, e.g., video CDs, DVD standard discs, MP3 audio, etc., and media playback devices.

Stiegler in view of Sekine fail to teach an audio buffer for intermediately storing the separated audio data, a bit rate converter to recode, a video buffer for intermediately storing the separated video data, and a control unit that is connected to the audio buffer

and the video buffer, and which specifies and controls the adjustable intermediate storage time of the buffers.

In an analogous art, Wakai teaches it is desirable to use an audio buffer for intermediately storing separated audio data before it is transmitted to a ring network so that synchronization within the passenger entertainment system is maintained based on the network transmission rate (fig. 1) (col. 24, lines 23-42). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler in view of Sekine to include an audio buffer for intermediately storing the separated audio data as taught by Wakai for the well known advantages of improving transmission load efficiency and reducing data read/write/codec errors because buffers enable interconnecting of two digital circuits operating at different rates, holding data for use at a later time, allowing timing corrections to be made on a data stream, collecting binary data bits into groups that can then be operated on as a unit, and delaying the transit time of a signal in order to allow other operations to occur.

Stiegler in view of Sekine and Wakai, fail to teach a bit rate converter to recode, a video buffer for intermediately storing the separated video data, and a control unit that is connected to the audio buffer and the video buffer, and which specifies and controls the adjustable intermediate storage time of the buffers.

In an analogous art Ng teaches a bit rate converter 514 (fig. 5) to recode a high definition signal 510 (fig. 5) to a standard (lower resolution) MAIN signal, e.g., a NTSC signal shown at 515 (col. 5, lines 13-35; col. 2, lines 21-30). Ng teaches a video buffer

516 (fig. 5) for intermediately storing the separated video data (col. 5, lines 29-32). Ng does this so that when the signal (Y' I' Q') separated from the high definition signal 510 is received as an auxiliary signal by a receiver/decoder it will maintain synchronism with the main signal, e.g., audio or video, transmitted on a network are properly aligned/synchronous when recombined for presentation at the receiver/decoder (col. 2, lines 14-31). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler in view of Sekine and Van Steenbrugge to include a bit rate converter to recode, and a video buffer for intermediately storing the separated video data as taught by Ng for the added advantage of minimizing system and receiver cost by transmitting a less bandwidth demanding signal that is compatible with a plurality of commercially available and standard receiver devices.

Stiegler in view of Sekine, Wakai, and Ng teach control units connected to the audio (Van Steenbrugge – col. 5, lines 25-35 – control arrangement 416 – fig. 4) and video buffers (Ng - 516, 518 – fig. 5; col. 4, lines 9-12; col. 5, lines 29-32 & lines 50-56), however, Stiegler in view of Sekine, Wakai, and Ng fail to teach a control unit which specifies and controls the adjustable intermediate storage time of the buffers.

In an analogous art Stanger teaches it is desirable to use a control unit 80 (fig. 4) which specifies and controls the adjustable intermediate storage time of buffers for controlling bit rate output when distributing compressed a audio/video signal in a limited bandwidth network (col. 4, lines 42-51; col. 3, lines 15-47; col. 7, lines 39-42). It would

have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler in view of Sekine, Van Steenbrugge, and Ng to include a control unit which specifies and controls the adjustable intermediate storage time of the buffers as taught by Stanger for the added advantage of reducing the bit rate of the source signal and conserving bandwidth on the data line/ring network (Stanger – col. 1, lines 30-34).

Regarding claim 2, Stiegler in view of Sekine, Wakai, Ng and Stanger teach the data source for compressed audio and video data 510 (Ng - fig. 5) is a data source for other (auxiliary) compressed data (delta Y, delta I, delta Q – Ng fig.5) wherein the demultiplexer separates the other compressed data from the main audio data and the video data (Ng – col. 5, lines 43-49; col. 2, lines 14-15, 22-25; Stiegler – col. 2, lines 26-27), and wherein the data source further comprises

a second bit rate converter 542 (Ng – fig. 5) for recoding the other, compressed data (col. 7, lines 34-36 & col. 7, lines 60-66; in which a compressed video source of variable bit rate is converted/recoded to a constant data rate for multiplexing with audio and control data – fig. 6), and

a data buffer (518 – fig. 5; 625 – fig. 6) for the intermediate storage of the separated other data (col. 5, lines 50-56; col. 7, 38-63), and wherein bus interface is configured to insert the delayed, decoded audio data, the delayed recoded video data, and the delayed, recoded other data into their intended component bit groups (Stiegler

– col. 2, lines 9-27 & lines 52-62; col. 3, lines 48-52; col. 4, lines 42-47; col. 6, lines 50-54).

Regarding claim 3, Stiegler in view of Sekine, Wakai, Ng and Stanger teach at least one of the buffers is situated before the bus interface (It would have been obvious to situate the audio and video buffers before the bus/transmission network interface to reduce compression/decompression errors, i.e., "jitter", by synchronizing the rates of operation of data source/subscriber and the transmission network; Wakai – col. 24, lines 39-42).

Regarding claim 5, Stiegler in view of Sekine, Wakai, Ng and Stanger teach analytical units are associated with the bit stream decoder and the bit rate converters, which determine the time relation of the compressed video data with respect to the compressed audio data, and which are collected to the control unit to specify the intermediate storage times (Stanger - col. 3, lines 64-col. 4, line 1; col. 4, lines 42-51; col. 5, lines 12-15; col. 6, lines 15-42 & col. 7, lines 4-7).

Regarding claim 6, Stiegler in view of Sekine, Wakai, Ng and Stanger teach the control unit controls the bit stream decoder and the bit rate converter (Stanger - col. 3, lines 64-col. 4, line 1; col. 4, lines 42-51; col. 5, lines 12-15), such that the time differences due to different processing times in the data source can be reduced in the displayed signals (Stanger - col. 4, lines 45-51).

Regarding claim 7, Stiegler in view of Sekine, Wakai, Ng and Stanger teach the data line is an optical line (Stiegler – col. 6, lines 15-18).

Regarding claim 8, Stiegler in view of Sekine, Wakai, Ng and Stanger teach the bit rate converter for the compressed video data is connected to the control unit (as discussed above in claim 1), and can be controlled over this connecting line in such a way that the extent of data reduction during the bit rate conversion and thus the processing time needed for this can be adjusted (Stanger – col. 3, lines 43-49; col. 6, lines 15-42 & col. 7, lines 4-7) in dependence on the resolution of the display in the associated data sink for video data (Ng – col. 5, lines 19-29; it would have been obvious to provide bit rate reduction depending on the resolution of the receiver's display because it improves bandwidth efficiency by eliminating excessive bit rates while still providing a high quality image and minimizes receiver/decoder cost because the device will not require the more expensive equipment used to decode high bit rates – Stanger – col. 8, lines 18-22).

Regarding claim 9, Stiegler in view of Sekine, Wakai, Ng and Stanger teach the bit stream decoder converts the compressed audio signal into a PCM (SPDIF) signal (Stiegler – col. 3, lines 44-47; in which Stiegler inherently discloses a PCM signal because SPDIF or IEC 958 type II specifies PCM audio signals).

Regarding claim 10, Stiegler in view of Sekine, Wakai, Ng and Stanger fail disclose the data source comprises a DVD player, however the examiner takes Official Notice that it was well known at the time of the applicants invention to use DVD players as sources for compressed video such as commercial/theatrical releases of movies and audiovisual entertainment. It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler in view of Sekine, Wakai, Ng and Stanger to include a DVD player (as evidenced by Nakatsugawa US 6,408,011 B1 – col. 9, lines 15-20 & 39) for the advantage of providing commercially available and inexpensive entertainment media of high quality.

Regarding claim 12, Stiegler in view of Sekine, Wakai, Ng and Stanger teach a control unit connected to the audio buffer, the video buffer, and the other data buffer, that specifies and controls the adjustable intermediate storage time of the buffers as discussed in claim 1 above.

Regarding claim 16, Stiegler in view of Sekine, Wakai, Ng and Stanger, teach wherein the audio data processing path comprises:

a bit stream decoder for decoding the separated compressed audio data, converting the audio data into an uncompressed format (Wakai – 20- fig. 2; it would

have been obvious to decompress the signal to minimize receiver hardware cost by eliminating the need for a hardware mixer); and

an audio buffer for storing the separated audio data for an intermediate time determined by the control instruction (Stanger – col. 4, lines 42-51).

Regarding claim 18, Stiegler in view of Sekine, Wakai, Ng and Stanger, teach the subscriber data source comprises:

a device that generates a compressed source signal including compressed audio data and compressed video data (as discussed in claim 1 above); and

a pre-processing circuit configured to separately process the compressed audio data and the compressed video data to generate uncompressed audio data (Wakai – 20- fig. 2; it would have been obvious to decompress the signal to minimize receiver hardware cost by eliminating the need for a hardware mixer) and a reduced quantity compressed video data (as discussed above in claim 1), wherein time differences in the separate processing of correlated audio data and video data is minimized (Stanger – col. 4, lines 42-51).

Regarding claim 20, Stiegler in view of Sekine, Wakai, Ng and Stanger, teach decoding the compressed audio data into an uncompressed format (Wakai – 20- fig. 2; it would have been obvious to decompress the signal to minimize receiver hardware cost by eliminating the need for a hardware mixer;

recoding the compressed video data to reduce the quantity of video data (Ng – col. 5, lines 20-29; Stanger – col. 6, lines 15-24; col. 8, lines 18-21); and

combining the decoded audio data and the recoded video data into component picture groups for parallel transmission over the local network to their respective data sinks (Stanger – col. 5, lines 56-64; Stiegler – col. 6, lines 33-54).

3. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stiegler et al. (US 5,940,398), in view of Sekine et al. (US 5,808,660), in further view of Wakai et al. (US 5,596,647), in further view of Ng et al. (US 5,121,205), and in even further view of Stanger et al. (US 6,097,435) as applied to claim 1 above, and further in view of Kawamura et al. (US 2001/0014207 A1).

Regarding claim 4, Stiegler in view of Sekine, Wakai, Ng and Stanger fail to teach at least one buffer is interposed between the demultiplexer and the bit stream decoder or bit rate converter associated with it. However, in an analogous art Kawamura teaches at least one buffer (6,9, and 12 – fig. 1) is interposed between the demultiplexer 5 and the bit stream decoders 8,11, 14 for synchronizing the signals based on decoding time stamps detected (par. 103, 165, 167, 22). It would have been obvious to one of ordinary skill in the art at the time of the applicant's invention to modify the system of Stiegler in view of Sekine, Wakai, Ng and Stanger to include at least one buffer is interposed between the demultiplexer and the bit stream decoder associated with it as taught by Kawamura for the added advantage of improving the quality of the system by enabling separated signals, e.g., from audiovisual content, to stay

synchronized within themselves and the network when played back on a device (Kawamura –par. 22, Stiegler – col. 4, lines 20-25).

4. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Stiegler et al. (US 5,940,398), in view of Sekine et al. (US 5,808,660), in further view of Wakai et al. (US 5,596,647), in further view of Ng et al. (US 5,121,205), and in even further view of Stanger et al. (US 6,097,435) as applied to claim 1above, and further in view of Fujii et al. (US 5,898,695).

Regarding claim 11, Stiegler in view of Sekine, Wakai, Ng and Stanger teach control signals (including clock signals) are transmitted to the receiver (data sink) (Stiegler – col. 3, lines 13-2; col. 4, lines 26; col. 6, line s45-47) however Stiegler in view of Sekine, Wakai, Ng and Stanger fail to teach the data sink comprises a buffer for the intermediate storage of the received data, whose storage time can be adjusted as a function of the control signal.

In an analogous art Fujii teaches the data sink comprises a buffer (71, 74 – fig. 1) for the intermediate storage of the received data, whose storage time can be adjusted as a function of the control signal 72 (col. 8, lines 4-27; col. 8, line 66-col. 9, line 3). It would have been obvious to one of ordinary skill in the art at the time of the applicants invention to modify the system of Stiegler in view of Sekine, Wakai, Ng and Stanger to include the data sink comprises a buffer for the intermediate storage of the received data, whose storage time can be adjusted as a function of the control signal as taught

by Fujii for the added advantage of preventing decoding/receiving errors caused by the inherent delays in the system by synchronizing the audio and video programs (Fujii - col. 8, line 66-col. 9, line 3).

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Clyde H. Jones III whose telephone number is 571-272-5946. The examiner can normally be reached on 9-5:30 p.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chris Grant can be reached on 571-272-7294. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Note to Applicant

Art Units 2611, 2614 and 2617 have changed to 2623. Please make all future correspondence indicate the new designation 2623.

CJ

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